

Chuitna Iron Site-specific Study Proposal

William Beckwith to: Hanh Shaw

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Cc: "Powell, James E (DEC)", "George, Kenwyn P (DEC)", "Nakanishi, Allan S (DEC)"

Hello Hanh - Through communications with staff at EPA's National Center for Environmental Assessment and EPA's Health and Ecological Criteria Division at EPA I have learned that it is not accurate to say that Conditional Probability Analysis (CPA) is an EPA recommended approach for developing site-specific criteria for iron and nutrients. Nevertheless EPA has found that empirical approaches using field data are appropriate for deriving criteria for such pollutants. There is a draft "Empirical Approaches for Nutrient Criteria Derivation" document scheduled for Science Advisory Board review this week (September 9-11, 2009), that can be accessed at the link below. CPA is presented in that document for use in data exploration, to screen variables for use in development of stressor-response relationships, and to estimate the proportion of waterbodies currently meeting or not meeting a selected end point in a sample population of all waterbodies with a pollutant concentration at or above one or more proposed candidate criteria. CPA is not recommended, however, as a method for establishing stressor-response relationships and associated numeric values that might be used as criteria. A comment was also made that the sample size of 22 is very small for such an analysis, and the sites are likely to be autocorrelated as they are from a single basin. I will try to follow-up on this given that the proposal is to develop criteria for a single basin.

The following points have also been made for criteria development:

- One or more individual endpoints that measure adverse response to the stressor of concern should be considered rather than an index such as an index of biological integrity (IBI)
- Appropriate selection of the acceptable effect level for the endpoint is critical for ensure protection consistent with Clean Water Act goals.
- Effects on invertebrates should be evaluated as well as effects on fish.

[http://yosemite.epa.gov/sab/sabproduct.nsf/B8765A5EC228792A852576150079D897/\\$File/Final+Draft+Empirical+Approaches+08-17-2009+for+EPEC+Sept+9-11+2009+Meeting.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/B8765A5EC228792A852576150079D897/$File/Final+Draft+Empirical+Approaches+08-17-2009+for+EPEC+Sept+9-11+2009+Meeting.pdf)

- Bill
206-553-2495